

## **ABSTRACT OF THE DISCLOSURE**

In a method for fabricating a semiconductor device, a first semiconductor layer of aluminum gallium nitride is first formed on a substrate, and a protection film containing silicon is then formed on the first semiconductor layer in such a manner that a device-  
5 isolation region is uncovered. Thereafter, the method further includes the step of heat-treating the first semiconductor layer in an oxidizing atmosphere whose temperature is adjusted to be within a range of 950 °C or more and 1050 °C or less.